

I observed for local time the same evening with the meridian circle :—

					Clock Correction.
					^s
5 Ursæ Min., S.P. (one wire only)	...	...	...	...	−50 ^s 25
δ Ceti	...	...	...	...	−50 ^s 52
θ Persei	...	...	...	...	−50 ^s 41
δ Geminorum	...	...	...	...	−50 ^s 60
Daily rate of clock	...	...	...	...	−0 ^s 58

The coordinates of the observatory are : Lat. $51^{\circ} 34' 47''.4$ N.; Long. (W. of Greenwich) $1^m 19^s.85$; height above mean sea level, 220 feet.

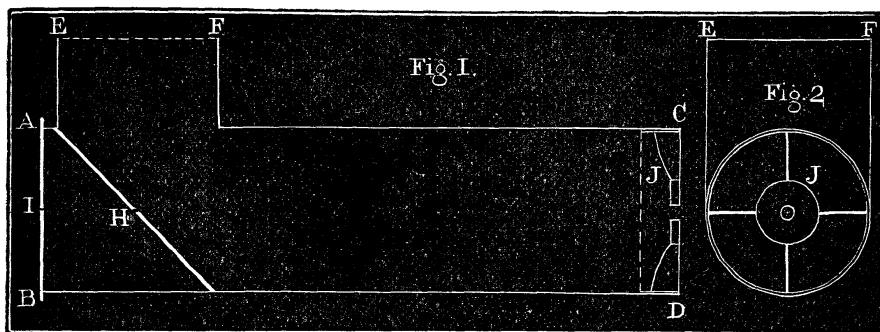
Note by General Tennant.—The peculiarity (for I seem to have been singular) in my estimation of the colour of the Moon during eclipse is probably due to the eye. In vol. xxix. p. 106, of the *Notices*, will be found a note that red stars did not produce on my eye the impression of marked colour. This especially refers to the right eye used in these observations.

An Improved Centering Tube for Reflecting Telescopes.

By Edward Crossley, M.P.

In the *Monthly Notices* for March 1887 I gave a description of a new centering tube for reflecting telescopes. I have since much improved its construction so as to make it more easily used and more accurate.

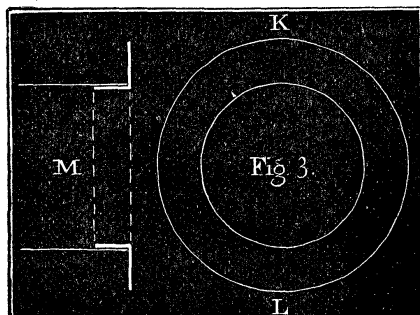
It consists of a tube A B C D, figs. 1, 2, 10 inches long, $2\frac{5}{8}$ inches in diameter, with an open elbow E F. Opposite this elbow is placed a plane reflector, A G, perforated at H. A surface of bright tin answers well. In the centre at A B is the pin hole I. At C D is placed a perforated disc, J, 1 inch in diameter, with $\frac{1}{4}$ -inch hole, attached to a rim by four arms placed edgewise; the rim slides into the tube. It is used in the following manner :—



The tube is placed in the eyepiece end or holder of the telescope, to which it is a nice fit; and looking through I H and the

whole aperture C D without removing J, the eye end is adjusted so that the flat appears central. A disc of white paper half the diameter of the tube is gummed to the centre of the face of the large mirror. The flat is then adjusted so as to show the disc by reflection central in the aperture of J.

These operations can be performed by daylight. The disc is most easily seen by side light down the tube.



In order that the last operation can also be performed by daylight a ring cap or collar, K L of section M, is placed in the tube at C D, and the plane annular face of this collar towards the flat is painted white.

The daylight which illuminates the disc on the large mirror will also illuminate the white ring, and the large mirror can now be adjusted so that the white ring shall appear by reflection exactly central with the disc. The adjustment of the telescope is now complete.

The whole of these adjustments can also be made in the same order by holding a bull's-eye lantern with the lens in the elbow E F. The elbow shields the eye from the light. The mirror A G throws ample light through the aperture C D without removing J, so that an image of the aperture is reflected back by the large mirror and the flat so as to appear like a halo surrounding the disc (like an annular eclipse of the sun) in the centre of the aperture J, when the flat and the large mirror have been adjusted in the same order as before.

The advantages of this centering tube are that it can be used night or day in any position of the telescope by simply putting it in place of the eyepiece, and accurate centering is at once obtained.